



**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 89872**

I. INTRODUCTION

This Class I Renewal permit is for the continued operation of Cochise County Solid Waste Division's Western Regional Landfill. Permit No. 89872 renews and supersedes Permit No. 64381.

A. Company Information

Facility Name: Cochise County Western Regional Landfill

Mailing Address: 2595 N. Sagebrush Road,
Huachuca City, AZ 85616-8307

Facility Location: 2595 N. Sagebrush Road,
Huachuca City, AZ 85616-8307

B. Attainment Classification

The facility is located in Cochise County which is classified as attainment or unclassified for all criteria pollutants.

II. PROCESS DESCRIPTION

A. Process Description

Cochise County Western Regional Landfill (CCWRL) has been in operation since 2001, and accepts waste materials including household waste, household hazardous waste, commercial solid waste, non-hazardous sludge, conditionally exempt small quantity generator waste, and industrial non-hazardous solid waste, and disposing such wastes in compliance with federal and state regulations. The current approved landfill footprint of CCWRL consists of approximately 119 acres within a total 240-acre property area. A defined area of the landfill is excavated and prepared to receive waste prior to acceptance of refuse.

The natural decomposition of the waste materials, and to some extent the evaporation of volatile organic compounds (VOCs) in the waste materials, constitutes the primary sources of emissions. The landfill gas (LFG) that is emitted from the landfill mainly consists of methane (CH₄) and carbon dioxide (CO₂), with a fraction containing non-methane organic compounds (NMOCs) and hazardous air pollutants (HAPs). Fugitive particulate matter (PM) emissions are due to traffic on unpaved roads, application of a cover layer of soil, soil stockpiling, cover layer distribution, and wind erosion.

As the current emissions of NMOCs is below 34 mega grams per year (Mg/year), the landfill is not subject to landfill gas collection and control system requirements.

B. Control Devices**1. Daily Cover for Vector Control**

Incoming wastes are disposed of immediately in the active cell area and compacted to maximize the air space of the landfill as well as minimize waste exposure to potential vectors. Additionally, the active area (working face) of waste disposal is covered with tarp as an alternate daily cover (ADC) for earthen material. Compacted earthen material is spread over the entire working face at the end of any operating day preceding a period of time when the facility is closed for more than twenty-four (24) hours. These practices help reduce odor, control litter, insects, and rodents, and protect public health. A one-day stockpile of earthen cover material and equipment to move the soil and cover the active face is always kept available on site to ensure a corrective response to any violation of performance of any ADC.

2. Fugitive Dust Emissions Control

Two water trucks are used to spread water on haul roads, and storage piles to reduce and minimize fugitive dust during the working hours of each day.

C. Process Flow Diagram

A process flow diagram can be found in Appendix A.

III. LEARNING SITE EVALUATION

In accordance with ADEQ's Environmental Permits and Approvals near Learning Sites Policy, the Department is required to conduct an evaluation to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

The Department did not identify any learning sites within two miles of the facility.

IV. COMPLIANCE HISTORY**A. Physical Inspections and Compliance Certification Review**

During the five-year permit term that CCWRL operated under Permit No. 64381, this facility had four (4) physical inspections and nine (9) compliance certification reviews. No deficiencies were noted during these inspections or compliance certification report reviews.

B. Excess Emissions and Permit Deviation Report Review

During the five-year permit term that CCWRL operated under Permit No. 64381, two (2) deviations and no excess emissions have been reported.

1. Deviations

a. Inspection ID: 352776

This deviation reported that the semi-annual compliance certification for the reporting period of October 1, 2019 to March 31, 2020 was submitted late. Actions were taken to remedy the deviation as well as to prevent reoccurrence. This deviation did not result in any enforcement actions.

b. Inspection ID: 376834

This deviation reported that the employees' EPA Method 9 certification expired on March 18, 2021 due to the cancellation of Method 9 certification classes due to COVID-19. The Permittee was able to have employees recertified on May 8, 2021. Actions were taken to prevent reoccurrence of similar cases. This deviation did not result in any enforcement actions.

C. Performance tests conducted and results:

During the five-year permit term that CCWRL operated under Permit No. 64381, no performance tests have been conducted. A performance test protocol was submitted in June 2021 for the Tier 2 NMOC emission rate. The performance test is proposed to be conducted in August 2021.

V. EMISSIONS

The potential-to-emit (PTE) is calculated based on EPA's Compilation of Air Pollution Emission Factors (AP-42 Section 3.3, 13.2.2, and 13.2.4) and EPA landfill gas emissions model LandGEM. The throughput for this renewal permit is based on waste acceptance rate of 73,298 tons/year, and the throughput for the previous renewal permit LTF #64381 was based on waste acceptance rate of 75,985 tons/year. The NMOC emission rate for this renewal permit is based on the projected 2027 NMOC emission rate 19.77 megagrams (Mg) per year, and the NMOC emission rate for the previous renewal permit #64381 was based on the projected 2022 NMOC emission rate 17.06 Mg/year. The facility-wide PTE is provided in Table below:

Table 1: Potential to Emit (tpy)

| Pollutant | Emissions from LTF #64381 | Change in Emissions | Emissions |
|-------------------|---------------------------|---------------------|-----------|
| NO _x | 0.11 | - 0.01 | 0.10 |
| PM ₁₀ | 11.48 | - 0.41 | 11.07 |
| PM _{2.5} | 1.15 | - 0.04 | 1.11 |
| CO | 0.02 | 0 | 0.02 |
| SO ₂ | 0.01 | 0 | 0.01 |
| VOC | 7.32 | +1.17 | 8.49 |

| Pollutant | Emissions from LTF #64381 | Change in Emissions | Emissions |
|-------------------------|---------------------------|---------------------|-----------|
| HAPs | 3.94 | +0.75 | 4.69 |
| NMOCs | 18.77 | +2.98 | 21.75 |
| GHG (CO ₂ e) | 7.62E+3 | 1.46E+3 | 9.08E+3 |

VI. APPLICABLE REGULATIONS

Table identifies applicable regulations and verification as to why that standard applies. The table also contains a discussion of any regulations the emission unit is exempt from.

Table 2: Applicable Regulations

| Unit & year | Control Device | Rule | Discussion |
|--------------------------------------|------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Municipal Solid Waste (MSW) Landfill | Required when NMOC \geq 34 Mg/yr | 40 CFR Part 60, Subpart Cf | 40 Code of Federal Regulations (CFR) 60 Subpart Cf regulates emissions of landfill gas from MSW landfills for which construction, reconstruction, or modification was commenced on or before July 17, 2014. |
| | | 40 CFR Part 60, Subpart WWW | CCWRL was subject to Subpart WWW, however, as of August 27, 2020 this rule is no longer applicable since EPA approved Arizona's state plan to promulgate the EPA Emissions Guidelines and Compliance Times for MSW landfills. CCWRL is now subject to the more stringent requirements in 40 CFR Part 60 Subpart Cf per 40 CFR 60.750(d)(1). |
| | | 40 CFR Part 60, Subpart XXX | This subpart is not applicable because CCWRL did not commence construction, reconstruction, or modification after July 17, 2014 per 40 CFR 60.760(a). |
| Emergency Engine | N/A | A.A.C R18-2-719 40 CFR Part 63 Subpart ZZZZ | This standard applies to all stationary rotating machinery & Reciprocating Internal Combustion Engines (RICE) located at major and area sources of HAP emissions, and installed before April 2006. |

| Unit & year | Control Device | Rule | Discussion |
|-------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------|
| Fugitive dust sources | Water Trucks, Dust Suppressants | A.A.C. R18-2 Article 6 A.A.C. R18-2- 702 | These standards are applicable to all fugitive dust sources at the facility. |
| Abrasive Blasting | Wet blasting; Dust collecting equipment; Other approved methods | A.A.C. R-18-2- 702 A.A.C. R-18-2- 726 | These standards are applicable to any abrasive blasting operation. |
| Spray Painting | Enclosures | A.A.C. R18-2- 702 A.A.C. R-18-2- 727 | These standards are applicable to any spray painting operation. |
| Demolition/renovation Operations | N/A | A.A.C. R18-2- 1101.A.8 | This standard is applicable to any asbestos related demolition or renovation operations. |

VII. PREVIOUS PERMIT REVISIONS AND CONDITIONS

A. Previous Permit Revisions

The Permittee has not submitted any permit revision requests during the previous permit term.

B. Changes to Current Renewal

Table addresses the changes made to the sections and conditions from Permit No. 64381:

Table 3: Previous Permit Conditions

| Section No. | Determination | | | Comments |
|---------------------------|---------------|---------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Added | Revised | Deleted | |
| Att. "A" | | X | | General Provisions: Revised to represent the most recent template language |
| Att. "B" Section I | | X | | Facility Wide Requirements: Revised to represent the most recent template language |
| Att. "B" Section I.B | X | | | Operating Limitations: Added operating Limitations to not allow accepting asbestos or asbestos-containing materials. |
| Att. "B" Section I.C.2 | X | | | Reporting Requirements: Added permit conditions, and deviations from these conditions need to be promptly reported in accordance with Condition XI.B.2 of Attachment "A". |
| Att. "B" Section II | | X | | Landfill Requirements: |

| Section No. | Determination | | | Comments |
|-------------------------|---------------|---------|---------|------------------------------------------------------------------------------------------------------------------------------------------|
| | Added | Revised | Deleted | |
| | | | | Revised to reflect the language in 40 CFR Part 60, Subpart Cf |
| Att. "B" Section III | | | X | Asbestos Requirements: Deleted. |
| Att. "B" Section VI | | | X | Mobile Source Requirements: Deleted. |
| Att. "C" | | X | | Equipment List: Revised to reflect the most recent equipment operating at the facility and to include equipment information provided. |

VIII. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Table contains an inclusive but not an exhaustive list of the monitoring, recordkeeping and reporting requirements prescribed by the air quality permit. The table below is intended to provide insight to the public for how the Permittee is required to demonstrate compliance with the emission limits in the permit.

Table 4: Permit No. 89872

| Emission Unit | Pollutant | Emission Limit | Monitoring Requirements | Recordkeeping Requirements | Reporting Requirements |
|----------------------|-------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Landfill | Tier 1, 2, 3: NMOC Tier 4: Methane | Tier 1, 2, 3: 34 Mg/year Tier 4: surface methane emissions < 500 ppm | Tier 1, 2, 3: Monitor and estimate NMOC emissions on an annual basis using Tier 1, 2 or 3 procedures. Tier 4: Monitor and estimate surface methane emissions on a quarterly basis using Tier 4 procedures. | Tier 1-4: keep 5 years up-to-date, readily accessible, on-site records of the design capacity report, the current amount of solid waste in-place, and the year-to-year waste acceptance rate; if the Permittee converts the design capacity from volume to mass or mass to volume keep readily accessible, on-site records of the annual recalculation of the site-specific density, design capacity, and the supporting documentation. Tier 4: keep for at least 5 years up-to-date, readily accessible records of all surface emissions monitoring (SEM) and information related to monitoring instrument calibrations conducted | Tier 1-4: submit amended design capacity report providing notification of any increase in the design capacity within 90 days of the increase. Tier 1, 2, 3: If NMOC < 34 Mg/year, submit a periodic estimate of the NMOC emission rate report; if NMOC ≥ 34 Mg/year, use Tier 2 or 3 procedures to recalculate NMOC emission rate or conduct Tier 4 SEM and submit the report, or submit a gas collection and control system design plan within 1 year and install and operate a collection and control system within 30 months. Tier 4: provide a notification of the date(s) to demonstrate site-specific surface methane emissions are below 500 ppm |

| Emission Unit | Pollutant | Emission Limit | Monitoring Requirements | Recordkeeping Requirements | Reporting Requirements |
|------------------|-----------------|-------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | methane; if there is a delay to the scheduled Tier 4 SEM date, notify the Director by email or telephone no later than 48 hours before any known delay in the original test date, and arrange an updated date with the Director. If surface methane emissions ≥ 500 ppm, submit a gas collection and control system design plan within 1 year of the first measured concentration of methane ≥ 500 ppm and install and operate a collection and control system within 30 months of most recent Tier 2 NMOC ≥ 34 Mg/year. |
| Emergency Engine | PM | $PM \leq 1.02 Q^{0.769}$, Q = heat input in million Btu per hour | Conduct a quarterly survey of visible emissions | Keep records of a current, valid purchase contract, tariff sheet or transportation contract, and information regarding the lower heating value of the fuel | |
| | Opacity | 40% | | | |
| | SO ₂ | ≤ 1.0 lb/MMBtu | | Keep records of fuel supplier certifications or other documentation listing the sulfur content | Report to the Director any daily period if the sulfur content of the fuel exceeds 0.8% |

| Emission Unit | Pollutant | Emission Limit | Monitoring Requirements | Recordkeeping Requirements | Reporting Requirements |
|---------------------------|-----------|---------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Fugitive Dust | PM | 40% Opacity | A Method 9 observer is required to conduct visible emissions survey bi-weekly. | Record of the dates and types of dust control measures employed, and if applicable, the results of any Method 9 observations, and any corrective action taken to lower the opacity of any excess emissions. | |
| Abrasive Blasting | PM | 20% Opacity | | Record the date, duration and pollution control measures of any abrasive blasting project. | |
| Spray Painting | VOC | 20% Opacity Control 96% of the overspray | | Maintain records of the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project. | |
| Demolition/ Renovation | Asbestos | | | Maintain records of all asbestos related demolition or renovation projects including the “NESHAP Notification for Renovation and Demolition Activities” form and all supporting documents | |

IX. ENVIRONMENTAL JUSTICE ANALYSIS

The United States Environmental Protection Agency (EPA) defines Environmental Justice (EJ) to include the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income. The goal of evaluating EJ in permitting is to provide an opportunity for meaningful participation in the permitting process for overburdened populations or communities to. Overburdened is used to describe the minority, low-income, tribal and indigenous populations or communities that potentially experience disproportionate environmental harms and risks due to exposures or cumulative impacts or greater vulnerability to environmental hazards. This renewal permit has emission increases significantly below the permitting exemption thresholds and will not result in any additional impacts from the time of the initial permitting of the operation.

X. AMBIENT AIR IMPACT ANALYSIS

The emission increases resulting from this renewal permit are significantly below the permitting exemption thresholds, therefore an ambient air impact analysis is not required for this renewal permit.

XI. LIST OF ABBREVIATIONS

| | |
|-------------------|-----------------------------------------------------------------------|
| A.A.C. | Arizona Administrative Code |
| ADC | Alternate Daily Cover |
| ADEQ | Arizona Department of Environmental Quality |
| CCWRL | Cochise County Western Regional Landfill |
| CFR | Code of Federal Regulations |
| CH ₄ | Methane |
| CO | Carbon Monoxide |
| CO ₂ | Carbon Dioxide |
| CO ₂ e | CO ₂ equivalent basis |
| EJ | Environmental Justice |
| EPA | Environmental Protection Agency |
| GHG | Greenhouse Gases |
| HAPs | Hazardous Air Pollutants |
| LandGEM | Landfill Gas Emissions Model |
| lb | Pound |
| LFG | Landfill Gas |
| Mg | Mega gram |
| MMBtu | Million British Thermal Unit |
| MSW | Municipal Solid Waste |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NMOC | Non-methane Organic Compounds |
| NO _x | Nitrogen Oxides |
| NSPS | New Source Performance Standards |
| PM | Particulate Matter |
| PM ₁₀ | Particulate Matter no larger than 10 µm nominal aerodynamic diameter |
| PM _{2.5} | Particulate Matter no larger than 2.5 µm nominal aerodynamic diameter |
| PTE | Potential to Emit |
| SEM | Surface Emissions Monitoring |
| SO ₂ | Sulfur Dioxide Significant Impact Levels |
| ppm | Part per million |

TPY Tons per Year
VOC Volatile Organic Compound
yr Year

APPENDIX A

PROCESS FLOW DIAGRAM OF COCHISE COUNTY WESTERN REGIONAL LANDFILL

Flow Diagram of Solid Waste
Cochise County Western Regional Landfill (CCWRL or, WRL)

